San Jose Distribution Services saves $17,000 per year by improving lighting efficiency

"The PG&E Standard Performance Contract program was one of the many positive aspects of our lighting retrofit project. The incentive we received from PG&E allowed us to expand our retrofit project to include advanced controls, and that helped to maximize our savings. The result is that our team installed a lighting system that provides twice the light while using over 50% less electricity than our original system. We now have a better quality working environment and a BIG reduction in utility costs—that makes a winning project!"

Barry Cristina, CEO
San Jose Distribution Services

"The Industrial Lighting Company has always worked to install lighting systems that save money while improving the working environment of a facility. Achieving both goals frequently requires that we introduce new technology to our clients, and PG&E has a great history of supporting cutting edge equipment. The PG&E staff and their consultants understood the client and the needs of this project, and they provided excellent support at every step. They were a critical part of this installation."

Floyd Keneipp, President
The Industrial Lighting Company

THE PROJECT

With 330,000 square feet of warehouse storage space, San Jose Distribution Services realized that upgrading their existing lighting system with more efficient lighting fixtures would produce significant energy and cost savings. The retrofit included replacement of the lighting fixtures as well as equipping many of the new fixtures with occupancy sensor controls, allowing individual lights to be turned off when a space is unoccupied. By implementing these efficiency and control measures, San Jose Distribution Services reduced their annual energy costs, saving more than $16,600 per year, and reducing net annual facility consumption by over 17%. In addition to the avoided energy cost, the new modern lighting system also provides a higher quality, more uniform light source compared to the old lighting system.

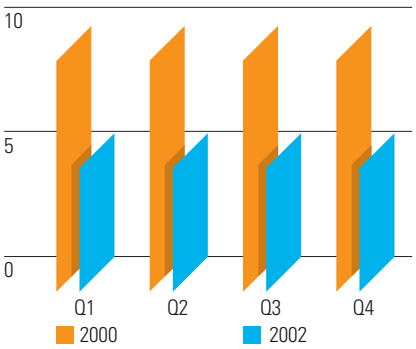
THE CUSTOMER

San Jose Distribution Services provides warehousing logistics for a wide variety of products and materials from Silicon Valley manufacturers and clients throughout the United States, Canada, and the Far East. The facility includes 330,000 square feet of high density warehouse storage space for computer components, food, paper products, medical devices, lighting fixtures and raw materials. The company recently installed a new modern lighting system that consumes significantly less energy, has longer lamp life, and better quality light.

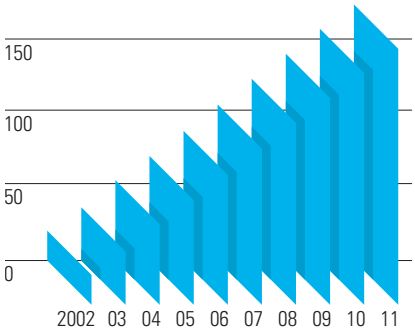
New energy efficiency technologies reduced operating costs at San Jose Distribution Services and are good for the environment as well.

By installing energy efficient lighting, San Jose Distribution Services is helping to reduce greenhouse gases and air pollutants caused by the production of electrical energy from non-renewable resources (such as fossil fuels). The energy savings realized by this project are estimated to reduce the production of carbon dioxide (CO_2) by 63 tons, sulfur dioxide (SO_2) by 0.1 pounds, and nitrous oxide (NO_x) by 35 pounds every year. Reduced power plant operations will result in cooling tower water savings of 50,000 gallons per year.

Energy Expense Comparison 2000/2002



Accumulated Energy Savings over 10 Years



THE TECHNOLOGY

Prior to the lighting retrofit, San Jose Distribution Service's warehouse was equipped with 400 watt mercury vapor and metal halide HID (High Intensity Discharge) high bay lighting fixtures. The lighting contractor replaced the existing fixtures with four-lamp linear fluorescent fixtures using High Output T-5 lamps and electronic Programmed Rapid Start ballasts. The 234 watts consumed by the new fixture is approximately 50% of the total consumption (458-465 watts) of the existing HID fixtures, but with an equivalent light output, a better distribution of the light, and with significantly improved lumen maintenance characteristics over the life of the lamps.

A key capability of the new T-5 fixture is the ability to re-strike the fixture almost instantly without appreciably affecting lamp life or operating characteristics. With the new lighting system, the customer is now able to control individual fixtures when an area is not occupied, resulting in additional energy and cost savings. The pre-existing HID fixtures required up to 12 minutes to restrike and come up to full light output, effectively preventing use of lighting controls strategies. In all, 81 of the 180 new T-5 light fixtures were equipped with occupancy sensors and strategically positioned in areas with low traffic such as storage rack structures.

MEASUREMENT AND VERIFICATION

Because the facility's operations and lighting usage hours did not change, the project's energy savings was calculated as the product of the difference between the pre- and post- fixture wattages, the annual run time, and the total number of fixtures. Energy savings resulting from the reduction in hours due to the occupancy sensors was not included in the SPC savings calculations. For similar lighting projects with changes in usage hours, or that operate on a variable schedule, some pre- and post-installation monitoring or occupancy sensor studies may be needed to accurately assess energy savings.

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PROJECT DATA:
Annual Facility Consumption:
631,500 kWh
Project Cost: $51,000
Annual Electricity Savings:
111,500 kWh
Annual Cost Savings:
$17,000
SPC Incentive: $10,000

ABOUT THE SPC PROGRAM

The Pacific Gas and Electric Company Standard Performance Contract Program is an innovative energy efficiency program funded by California utility ratepayers and administered by the state's investor-owned utilities. It provides substantial incentive payments to participants who implement energy efficiency retrofit projects in commercial and industrial facilities. Incentive amounts are based on demonstrated and verified kilowatt-hour and therm savings.

For more information about the Pacific Gas and Electric Company energy efficiency programs
CALL: 1-800-468-4743
VISIT OUR WEB SITE:
www.pge.com/smarterenergy

Pacific Gas and Electric Company